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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Nathalie Mougin

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PILLSBURY WINTHROP SHAW PITTMAN, LLP

P.O. BOX 10500

MCLEAN, VA 22102

EXAMINER

WANG, SHENGJUN

ART UNIT

PAPER NUMBER

1617

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/904,516	Applicant(s) MOUGIN ET AL.	
	Examiner Shengjun Wang	Art Unit 1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18,19,23,24,27,28 and 30-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18,19,23,24,27,28 and 30-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election of invention group I, drawn to a cosmetic composition comprising a amphoteric polyurethane of formula (I) as defined in claim 18, wherein the m and r are not zero, Y is polyethylene glycol, Z is oxygen, and R-X-(P)n- and -(P')p-X'-R' containing ammonium moieties, and hydrophobic moieties, in the reply filed on February 13, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections 35 U.S.C. 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 18, 19, 23, 24, 27, 28, 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US 6,335,003), in further view of Munzmay et al. (5,153,297).

4. The elected inventions read on cosmetic composition comprising a cationic polyurethane produced by the reaction of at least two diisocyanate and at least one polyethylene glycol, wherein the cationic ammonium groups are with a hydrophobic groups and are at the terminals of the polyurethane.

5. Kim et al. teaches the employment of a cationic polyurethane in cosmetic preparation, wherein the polyurethane may be prepared by the reaction of at least one diisocyanate and at

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least one amino alcohol, diamine or triamine, wherein the diisocyanate may be alkylene, cyclic alkylene, diisocyanates, or reaction product of those basic diisocyanate with diol, diamino groups. The diol may be polyethylene glycol, polypropylene glycol with molecular weight up to 2000. See, particularly, col. 2, lines 15-58, and the claims. The amine groups in the polyurethane may be quaternized before use. The anion may be chloride, bromide, and iodide. Groups attached to the cationic nitrogen may be C1-4 alkyl groups, or C7-10 phenyl alkyl groups, meeting the limitation of hydrophobic group herein required. Further, as is customary in the making of polyurethane, chain extender, such as diamino compounds, may be used. See, particularly, col. 4, line 33 to col. 5, line 33.

6. Kim et al do not teach expressly an example of polyurethane with terminal cationic ammonium groups.

7. However, Munzmay et al. teaches that it is known in the art that cationic groups may be at the terminal position of polyurethane. See, particularly, col. 6, line 64 to col. 7, line 2.

Therefore, it would have been prima facie obvious to a person of ordinary skill in the art, at the time the claimed the invention was made, to make a polyurethane as taught by Kim et al. with cationic ammonium groups at the terminals of the polyurethane.

A person of ordinary skill in the art would have been motivated to make a polyurethane as taught by Kim et al. with cationic ammonium groups at the terminals of the polyurethane because making cationic polyurethane by quaternizing terminal groups is a known method in the art. Absent evidence to the contrary, such quaternizing method is seen as an obvious engineering choice to one of ordinary skill in the art. As to the limitation of molecular weight, it is noted that Kim require at least one diisocyanate and at least one diol, or diamino, and about 50 to 200


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noncationic nitrogens, or about 20 to 100 of basic diisocyanates. Therefore, the molecular weight of the polyurethane of Kim et al. would be within the range of the claimed invention (1000 to 300,000), assuming the molecular weight of basic diisocyanate is about 200 and the molecular weight diol and/or diamino is about 200.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shengjun Wang whose telephone number is (571) 272-0632. The examiner can normally be reached on Monday to Friday from 7:00 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan, can be reached on (571) 272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SHENGJUNWANG
PRIMARY EXAMINER
Shengjun Wang
Primary Examiner
Art Unit 1617